

Appl. No. 10/708,157  
Amdt. dated September 26, 2005  
Reply to Office action of July 11, 2005

**Amendments to the Drawings:**

The attached sheets of drawings include changes to Figs.2, 16-17.  
These sheets replace the original sheets that include Fig.2, 16-17.

5

Changes to the drawings 2, 16-17 include adding some of the item label numbers and these changes are detailed in the REMARKS section of this response. No new matter has been introduced.

10 Attachment: Replacement Sheet

Appl. No. 10/708,157  
Amdt. dated September 26, 2005  
Reply to Office action of July 11, 2005

### REMARKS/ARGUMENTS

*1. The drawings are objected under 37 CFR 1.84(p)(5).*

**5    Response:**

Amendments to Figs. 2, 16-17 required by the Examiner to include the following reference signs mentioned in the description is made:

- (1) #14 in Fig. 2, depicting rear substrate in page 2 of the specification,  
10    (2) #60 in Fig. 16, depicting PDP of the fifth embodiment in paragraph 0028 of the specification,  
      (3) #90 in Fig. 17, depicting PDP of the sixth embodiment in paragraph 0030 of the specification.

15        No new matter is entered. Consideration of the amendment to Figs.2, 16-17 is respectfully requested.

*2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.*

20

**Response:**

The title is amended to be more indicative, as shown in the Amendments to the Specification section. No new matter is entered. Consideration of this  
25    amendment is requested.

*3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Betsui et al. (US 5825128).*

Appl. No. 10/708,157  
Amdt. dated September September 26, 2005  
Reply to Office action of July 11, 2005

**Response:**

Claim 1 has been amended to overcome the above rejection.  
5 Specifically, claim 1 now includes an additional limitation regarding the  
first closed rib units positioned between a front substrate and a rear  
substrate, stating that each of the first closed rib unit defines a first  
discharge space. The above limitation is included in order to further  
define the structural considerations given to the claimed invention.

10

Betsui discloses a plasma display panel 1 comprising a plurality of  
discharge spaces 30 defined by separator walls 29 and each discharge space  
30 comprises at least two sub-pixel units EU. However, according to the  
Fig 3 and 4A of Betsui, the discharge spaces 30 are continuous to each  
15 other in each column. For example, the blue sub-pixel units EU in the  
second column are linked and do not form a close space. Therefore, Betsui  
does not exactly teach a closed rib units to separate a closed discharge  
space. In contrary, the first discharge spaces comprising at least two  
sub-pixel units in the present application are respectively defined in  
20 the first closed rib units and separated from other sub-pixel units or  
discharge spaces in the same column. Accordingly, the applicant asserts  
the structures of the present application are different from Betsui.  
Reconsideration of claim 1 is requested.

25 In addition, claims 2-3 are dependent on claim 1 and should be  
allowed if claim 1 is allowed.

Appl. No. 10/708,157  
Amdt. dated September 26, 2005  
Reply to Office action of July 11, 2005

*4. Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Sano et al. (US 6870316)*

**5 Response:**

Claim 1 has been amended to overcome the above rejection. Specifically, claim 1 now includes an additional limitation regarding the first closed rib units positioned between a front substrate and a rear substrate, stating that each of the first closed rib unit defines a first discharge space. The above limitation is included in order to further define the structural considerations given to the claimed invention.

Sano discloses a plasma display panel comprising a plurality of cells 27 defined by a barrier structure 29 and each cell 27 comprises at least two sub-pixel units. However, according to the Fig 6b and 10, Sano does not teach exactly forming a plurality of closed rib units to enclose a plurality of discharge spaces. As shown in Fig.10, the cells 27 are continuous to each other through a channel in each column and there is not ribs enclosing the cells 27 so that the cells 27 are separated from other discharge spaces or cells in the same column at all. In addition, although Sano discloses a closed barrier structure 29 to enclose each discharge spaces 27 in Fig.11, each discharge spaces 27 still only has a single sub-pixel unit. In contrary, the first discharge spaces comprising at least two sub-pixel units in the present application are respectively defined in the first closed rib unit, and are enclosed and separated from other discharge spaces by the closed rib units, the rear substrate, and the front substrate. The applicant asserts the structures of the present

Appl. No. 10/708,157  
Amdt. dated September September 26, 2005  
Reply to Office action of July 11, 2005

applicant are different from the structures disclosed by Sano.  
Reconsideration of claim 1 is requested.

Claims 2-3 are dependent on claim 1 and should be allowed if claim 1  
5 is allowed.

Regarding claim 4 and Figs.6 and 7, the present application recited  
that *the first electrode 42 and the second electrode 44 of each of the  
sub-pixel units 52 comprises a first protruded portion 43a and a second  
10 protruded portion 45b respectively, the first protruded portion 43a being  
opposite to the second protruded portion 53b for igniting plasma in each  
sub-pixel units, such as the sub-pixel unit 52.* Accordingly, each of the first  
discharge spaces 48 defined by the first closed rib units 48 has two  
sub-pixel units (such as two sub-pixel units 52 in one first closed rib unit  
15 48), and therefore there are two pairs of the first protruded portions  
43a, 43b and the second protruded portions 45a, 45b in each of the first  
discharge spaces 49.

In contrary, Sano discloses a plurality of display element electrodes  
20 41 constituted of a pair of electrode segments X and Y. And the display  
element electrodes 41 serves to cause discharge in the associated one of the  
cells 27 defined by the barrier structure 29 so that one cell 27 also serves  
as the first discharge space defined in the present application (Fig. 10). In  
other words, each continuous cell 27 has only one sub-pixel unit and  
25 only one pair of the display element 41. Furthermore, the electrodes X  
and Y have triangular shapes without any protruded portions opposite to  
each other. Therefore, the applicant asserts the structures are different  
from the structures disclosed by Sano. Reconsideration of claim 4 is

Appl. No. 10/708,157  
Amdt. dated September 26, 2005  
Reply to Office action of July 11, 2005

politely requested.

Claims 5-6 are canceled. Therefore, no consideration of claims 5-6 is needed anymore.

5

Regarding claim 7, the present application recited that each of the first closed rib units comprises at least one extended rib for separating the sub-pixel units. Although Sano discloses a plurality of cells 27 defined by the lattice-patterned barrier structure 29, each cell 27 still comprises only one sub-pixel unit and there is no extended rib or the like structure, which is used to define the different sub-pixel units from each other. Therefore, Sano is silent on forming at least one extended rib to define sub-pixel units in a single discharge space, which is defined in claim 7 of the present application. Reconsideration of claim 7 is politely requested.

15

Claim 8 is dependent on claim 7 and should be allowed if claim 7 is allowed. And claims 9-10 are dependent on claim 8 and should be allowed if claim 8 is allowed. Accordingly, reconsideration of claims 8-10 is hereby requested.

20

Regarding claims 11-14, the present application recited a plurality of second discharge spaces, which is positioned between the front substrate, the rear substrate and each of a second closed rib units. The second discharge spaces comprise only one of the sub-pixel units. The different amount of sub-pixel between the first discharge space and the second discharge space is not taught by Sano. Furthermore, because the first discharge spaces comprise two sub-pixel units and the second discharge spaces comprise only one, one of skilled in the art could arrange the

25

Appl. No. 10/708,157  
Amdt. dated September 26, 2005  
Reply to Office action of July 11, 2005

sub-pixel units need higher discharge voltage in the first discharge spaces and arrange the sub-pixel units need lower discharge voltage in the second discharge spaces to make the discharge voltages of all the sub-pixel units approximately identical according to the present application. Therefore  
5 reconsideration of claims 11-14 is requested.

Regarding claims 15-16, the present application recited a plurality of waffle-structured ribs positioned on the rear substrate and extending along a first direction. And each of the first discharge spaces is defined between  
10 the front substrate, the rear substrate, and two adjacent waffle-structured ribs. In other words, each first discharge space is defined in a closed structure. But according to Fig. 10 of Sano, the cells 27 are defined in a barrier structure 29 and each one is continuous to another through a channel in each column. Besides, each cells of Sano comprises only one  
15 sub-pixel while the first discharge spaces in the present application comprises two. The applicant asserts the structures are different from Sano. Reconsideration of claims 15-16 is politely requested.

Regarding claim 17, the present application recited a plurality of  
20 second discharge spaces comprising only one sub-pixel unit. Therefore the PDP taught by the present application has two kinds discharge spaces: The first discharge spaces have two sub-pixels and the second discharge spaces have one. The character is not disclosed in Sano. Reconsideration of claims 17 is politely requested.

25

Claims 18-20 are dependent on claim 17 and should be allowed if claim 17 is allowed.



Appl. No. 10/708,157  
Amdt. dated September 26, 2005  
Reply to Office action of July 11, 2005

Claims 21-24 are canceled. Consideration of claims 21-24 is therefore not needed anymore.

5 *Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Betsui et al. as applied to claim 1 above, and further in view of Amemiya (US 5640068).*

**Response:**

10 Claim 4 recited that the first electrode and the second electrode of each of the sub-pixel units comprise a first protruded portion and a second protruded portion respectively, and the first protruded portion is opposite to the second protruded portion for igniting plasma in each of the sub-pixel units. In other words, because each of the first discharge spaces comprises  
15 at least two of the sub-pixel units, it also comprises at least two pairs of the first protruded portions and the second protruded portions.

Although Betsui discloses a plurality of discharge spaces 30 defined by separator walls 29, the discharge spaces 30 are continuous to each other  
20 in each column. As mentioned above, the structure between Betsui and the present application is different. Amemiya teaches a plurality of pairs of column electrodes extending horizontally in parallel (Xi, Yi of Fig. 1). However, each pair of the column electrodes still serves to discharge one discharge space.

25

Therefore, the applicant asserts that the invention as recited in claim 4 is not obvious in view of the combination of Betsui and Amemiya.



Appl. No. 10/708,157  
Amdt. dated September September 26, 2005  
Reply to Office action of July 11, 2005

6. *New claims*

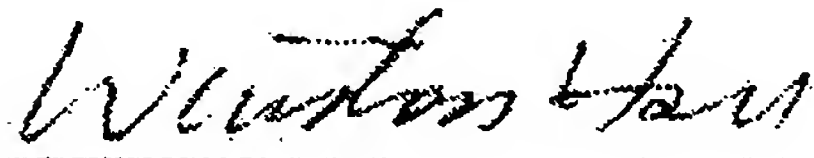
New claims 25-28 are presented. Claim 25 is independent and includes all limitations of original claims 21-23. The original claim 24 is rewritten as the new claim 27. No new matter is entered by these claims. Betui and  
5 Sano do not teach or suggest a plurality of first discharge spaces respectively having a plurality of first regions and a plurality of second regions defined between a front substrate, the rear substrate, and two adjacent bar-like ribs, and each of the first regions comprises two sub-pixel units. Consideration of new claims 25-28 is politely requested.

10

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,

15



Date: September 26, 2005

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

20 Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

25

Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

## Annotated Sheet Showing Changes

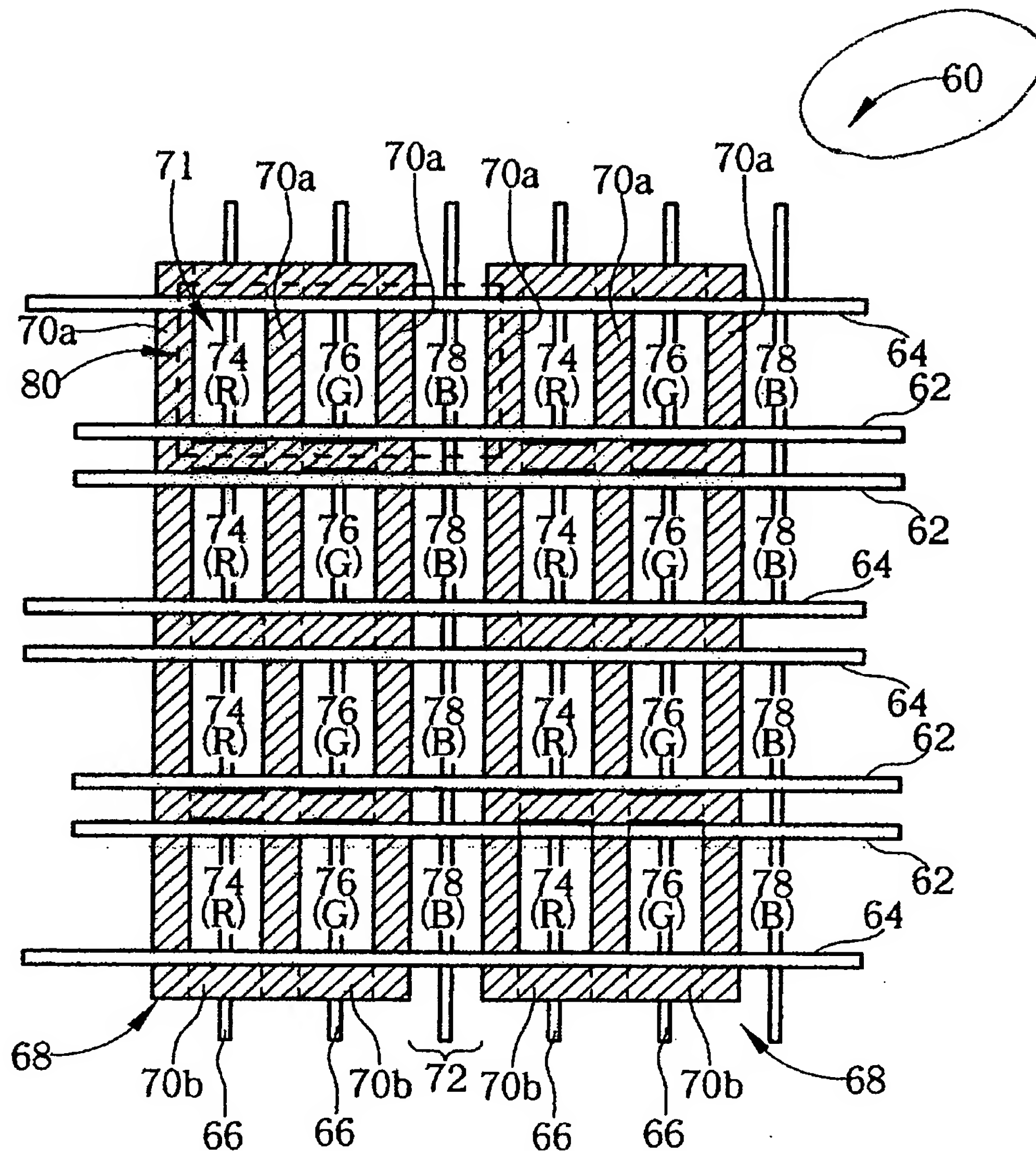


Fig. 16

BEST AVAILABLE COPY

## Annotated Sheet Showing Changes

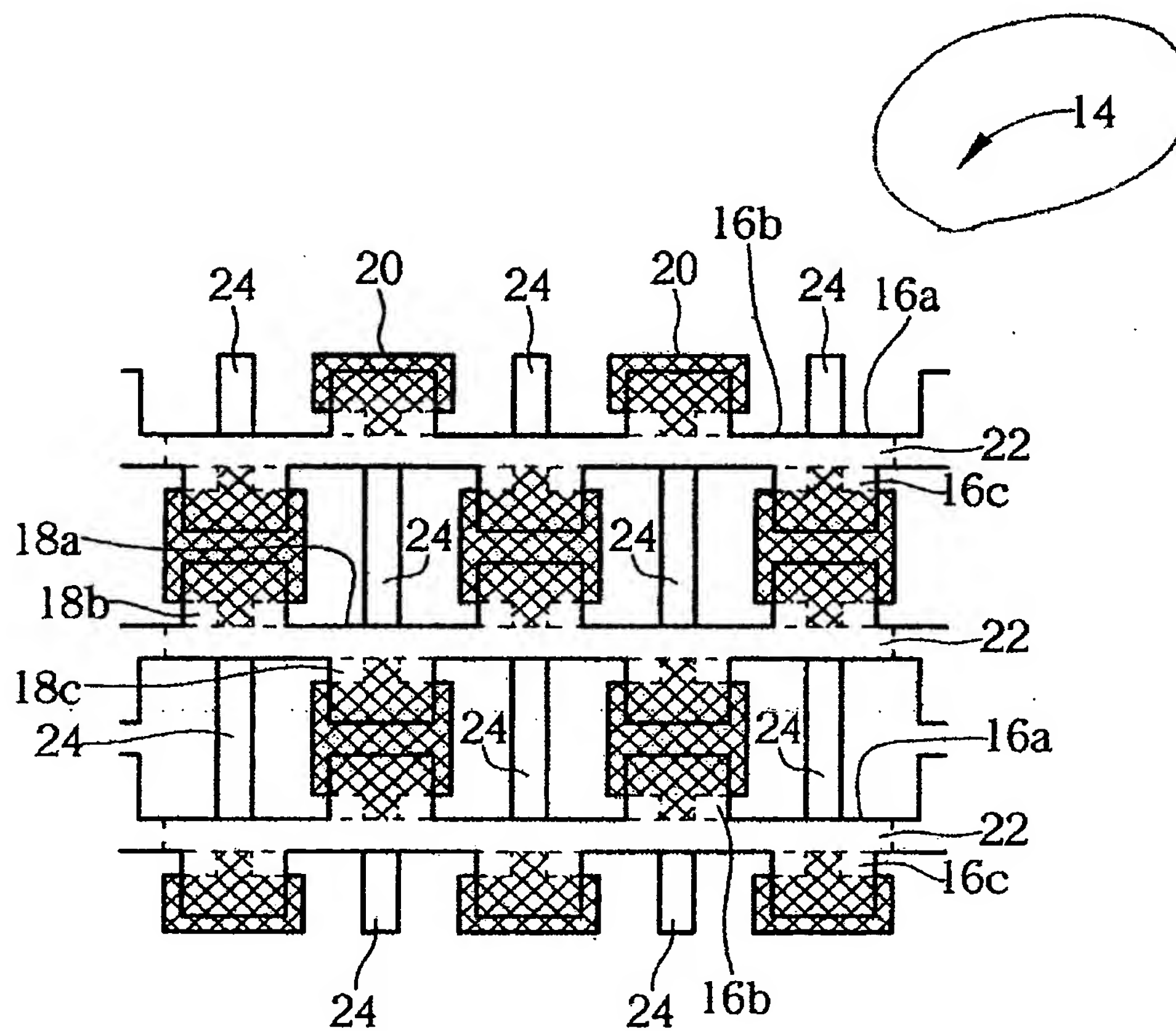


Fig. 2 Prior art

**BEST AVAILABLE COPY**

## Annotated Sheet Showing Changes

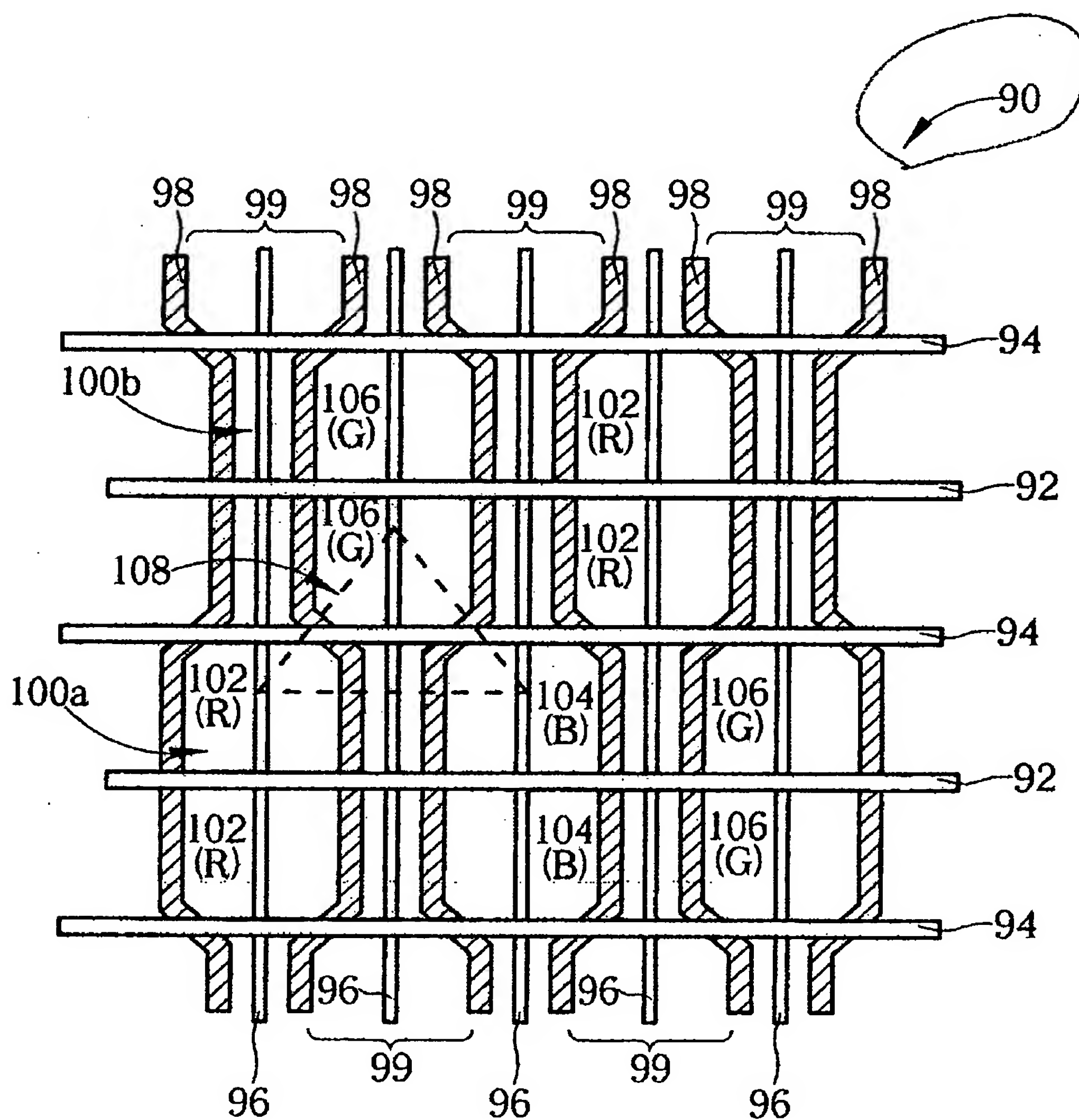


Fig. 17

BEST AVAILABLE COPY